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8 September 1955

MEMORANDUM FOR: EXECUTIVE GROUP, DD/P/MATERIEL BOARD**SUBJECT: Sound Modulation, Modification and Reproduction Device****REFERENCES: (a) Employee Suggestion No. 1282 of**

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(b) Memorandum for the Record by **TSS/TAG,**
dated 22 April 1955, Subject: Synthesis of Attribu-
table Speech

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(c) Memorandum for the Record by **TSS/APD,**
dated 27 April 1955, Subject: Same as above

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1. Reference (a) suggested the synthesis of speech which would be attributed to any desired person. It involves getting adequate samples of the person's speech and from them constructing the desired speech. The treatment involved in this process, which might include some outright fabrication, would be carried out by drawing by hand enlarged variable-area sound tracks, which would subsequently be reduced photographically.

2. Reference (b) describes a discussion held by TSS/TAG, with experts at Bell Telephone Laboratories. It was found that nothing could be achieved by working with variable-area sound tracks. It was estimated that a system which would permit speech synthesis would involve a program of probably hundreds of thousands of dollars and a long period of research and development. A subsequent visit by to Bell Telephone Laboratories reaffirmed the results of the first discussion.

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3. Reference (c) describes a discussion held by TSS/APD, with a group of experts from RCA. The consensus of this group was that although the fabrication or synthesis of a speech sound track might seem theoretically possible, it would be impracticable for several reasons. RCA is vitally interested in, and has spent considerable time and money on fabricating sound by any and all means. They suggested that they be approached in 2 or 3 years with the problem; at the present time there is no analysis equipment available anywhere that would enable them to make a coded paper record of speech. They were unwilling to give any real estimates of the cost involved in this problem, but indicated that it would be in the order of magnitude of one million dollars. In

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conclusion,

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FORM 100-2

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SECRET

SECRET

conclusion, they wanted to know why the use of an imitator was not considered, since this would be by far the most practical method.

4. On the basis of the previous discussion, which is covered in more detail in the referenced memoranda, it is recommended that a program for synthesizing or fabricating speech as suggested not be undertaken. The idea, although a very good one, is not workable or practicable from the technological standpoint, at least at this time.

[REDACTED]
AC/TSS/R&D

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